

TO: ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES & SERVICE CENTERS
ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES REPRESENTATIVES

MODEL AFFECTED: MA-325

The MA-325 can also be installed in radios other than the Micro Com Base Station transceivers. (See attached Service Manual Addendum.)

Installation for the MA-325 for the Micro Com mobile transceivers is covered in IA. Installation of the MA-325 into an XLH Series radio is covered in IB. Installation of the MA-325 into an XLU Series radio is covered in IC. The adjustment procedure for these installations is the same as for the MCB transceivers as stated in II.

For repeater speech compression, the MA-325B installation is covered in III. The adjustment procedure for this installation is covered in IV.

TECHNICAL SERVICE DEPARTMENT

REGENCY COMMUNICATIONS, INC.

MA-325 SERVICE MANUAL ADDENDUM

Purpose: To describe installation in Regency transceivers other than the Micro Com base stations

I. Installation:

A. MCH, MCU, MCL Mobile Transceivers (See Figure 1)

1. Remove the top and bottom cover and the bezel exposing the Control Board (i.e. - board with squelch and volume controls).
2. If the Control Board is not a Rev. N, then two holes must be punched above the volume control (shown in Figure 1)
3. Wire the same as for the base station -
i.e. - PØ to PØ (red)
G to G (blk)

incoming mic cable to U1 on MA-325
U5 to U1 in radio

B. XLH Series Transceivers

1. Remove top wrap (contains speaker).
2. Mount an option mounting bracket (if not already installed) by removing the speaker and placing the bracket on the two pins towards the rear of the wrap (see Figure 2).
3. Disconnect the shielded mic cable; re-route the cable towards the rear of the radio, being careful to locate the cable as far away from the VCO Board as possible (i.e. - route against chassis). Connect to U5 and G Pins on MA-325.
4. Connect shielded cable supplied between the U1 and G Pins of the Main Board and the MA-325.
5. Connect the red wire from PØ on Option Board to P1 (switched +13B) in the radio. This is available at Pin 5 of IC403.
6. Connect the black wire from G on the Option Board to the shield can of L407.

C. XLU Series Transceivers

1. Remove top wrap (contains speaker).
2. Mount option on shield. To do this the speaker retaining clips must be removed and speaker-shield wrap assembly dismantled. Locate the option in the front of the wrap.

NOTE: If the holes are not in the shield, two holes must be punched in the locations indicated in Figure 3.

3. Disconnect the shielded cable going to the U1 and G Pins (front corner by the VCO Board). Connect this cable to the input of the speech compressor amp, U5 and G Pins.
4. Connect the 6" shielded cable (supplied with the Option Board) from U1 on the MA-325 (ungrounded end) to the U1 and G Pins in the radio.
5. Connect the red wire from the PØ Pin on the MA-325 to the 13V switched line in the radio. This is available at the cathode of CR500 (by the relay at the rear of the radio).
6. Connect the black ground wire from G on the MA-325 to a chassis ground.

II. Adjustment Procedure

The adjustment procedure is the same as that described in Section IV in the Service Manual.

MA-325B REPEATER ADDENDUM

III. REPEATER INSTALLATION

1. Locate and drill two 1/8" holes on chassis. See Figure 4.
2. Mount compression amplifier board using two 4-40 x 3/8" flat head screws.
3. Disconnect jumper JU715 at A3 on the Control Board (green wire).
- 4a. Connect Pin A3 on jumper JU715 to U1 on compression amplifier.
- 4b. If jumper JU715 is too short, replace with JO13 (green) in repeater installation kit. The new jumper will also have a properly marked pin (U1).
5. From repeater installation kit install following jumpers:

<u>Jumper</u>	<u>Color</u>	<u>MA-325 Pin</u>	<u>Control Board Pin</u>
JO10	Red	PØ	P1
JO11	Black	G	G
JO12	Grey (J-Flex)	U5	A3

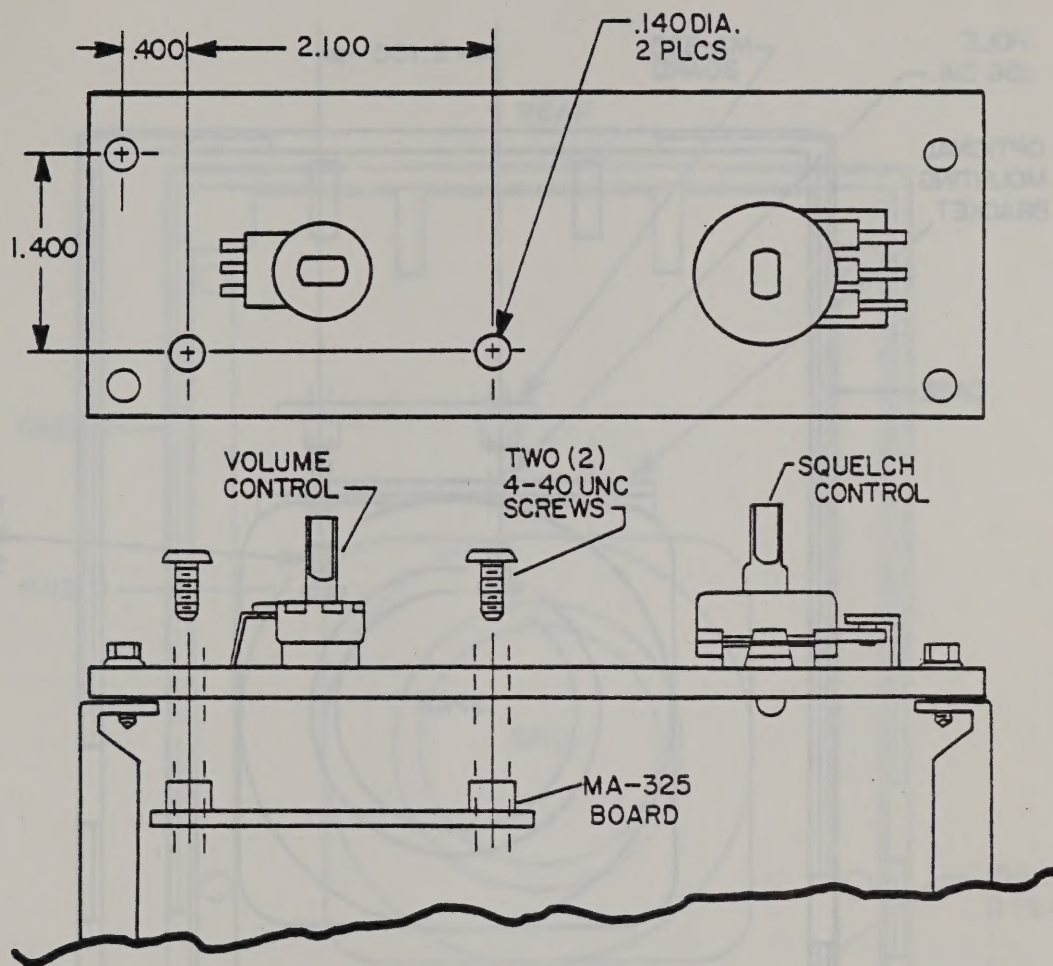
6. Set POT (R13) on MA-323 board to mid-range.

IV. ADJUSTMENT PROCEDURE

The following test and adjustments are made on the assumption that the basic radio is set up and adjusted according to standard Regency procedures as called out in the applicable manuals.

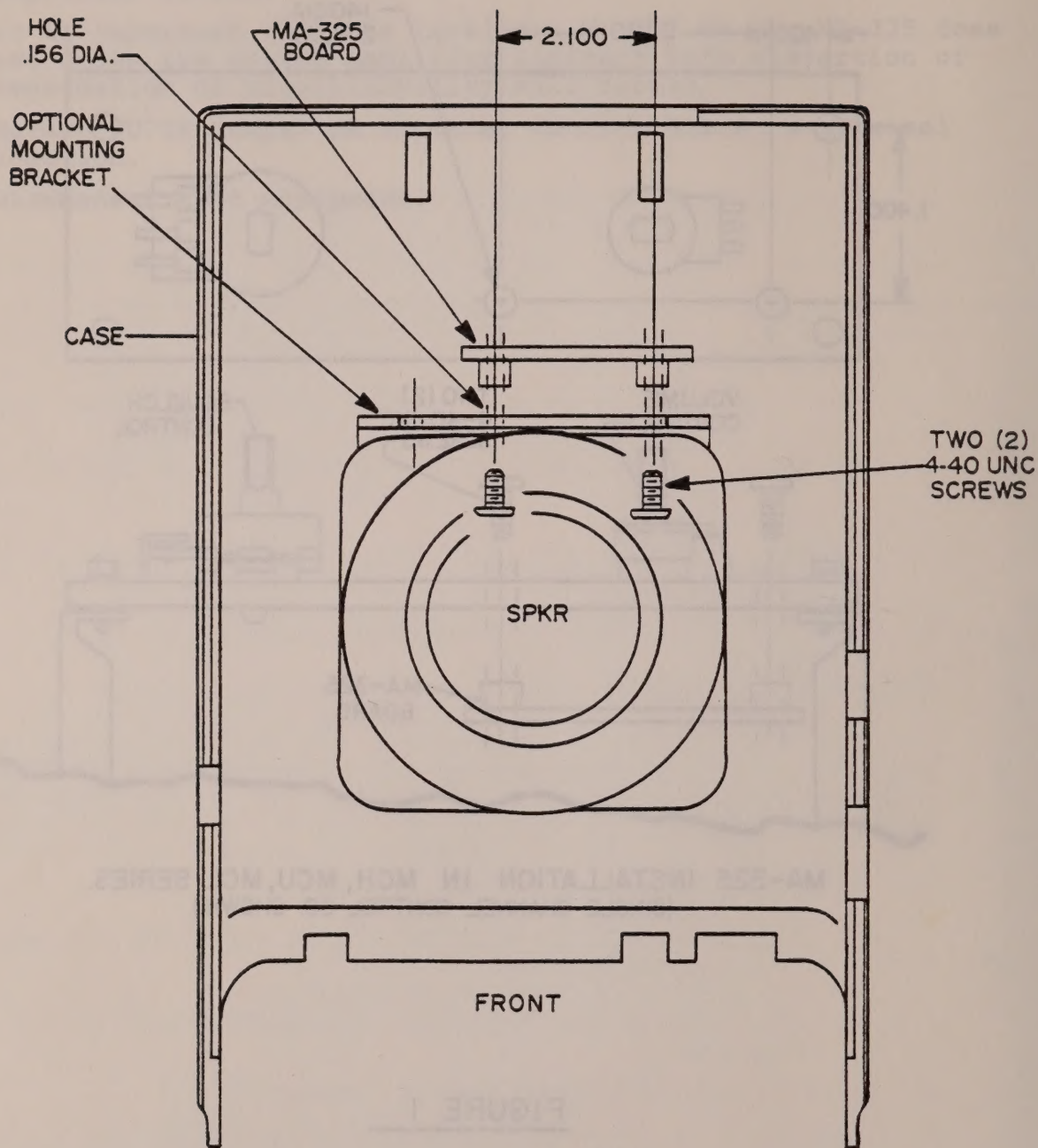
1. Equipment needed for test:
 - a. Signal generator with RF output adjusted to repeater receiver frequency.
 - b. Dummy load or 30dB power attenuator.
 - c. Deviation meter adjusted to repeater transmitter frequency.
2. Hook-up test equipment as per Figure 5.
3. Modulate the signal generator with a 1 KHz tone at 4 KHz deviation. Signal level should be approximately 100µV.
4. If repeater Control Board has the tone control option, then connect JU718 to P708. The repeater should now key-up with carrier.
5. Repeater audio level control, R728, located on the Tone/Control Board and the modulation control, R323 UHF, R328 UHF, on the Main Board, should not be adjusted in this procedure. If these controls need adjustment, bypass the MA-325 speech compressor by removing wires U1 and U5 from the board and temporarily connect them together. Then follow the proper test procedure for the repeater.

6. Adjust R15 on the MA-325 for 4 KHz repeat deviation. This point will be just before the clipping effect of the speech amplifier limiter.
7. It is important that the level set by R15 on the MA-325 does not drive the speech amplifier limiters into distortion or degradation of intelligibility will result.
8. Return JU718 jumper on repeater Control Board to original location.
9. Disconnect test equipment.



MA-325 INSTALLATION IN MCH, MCU, MCL SERIES.
(SINGLE CHANNEL CONTROL BD. SHOWN)

FIGURE 1



MA-325 INSTALLATION IN XLH SERIES TRANSCEIVER.

FIGURE 2

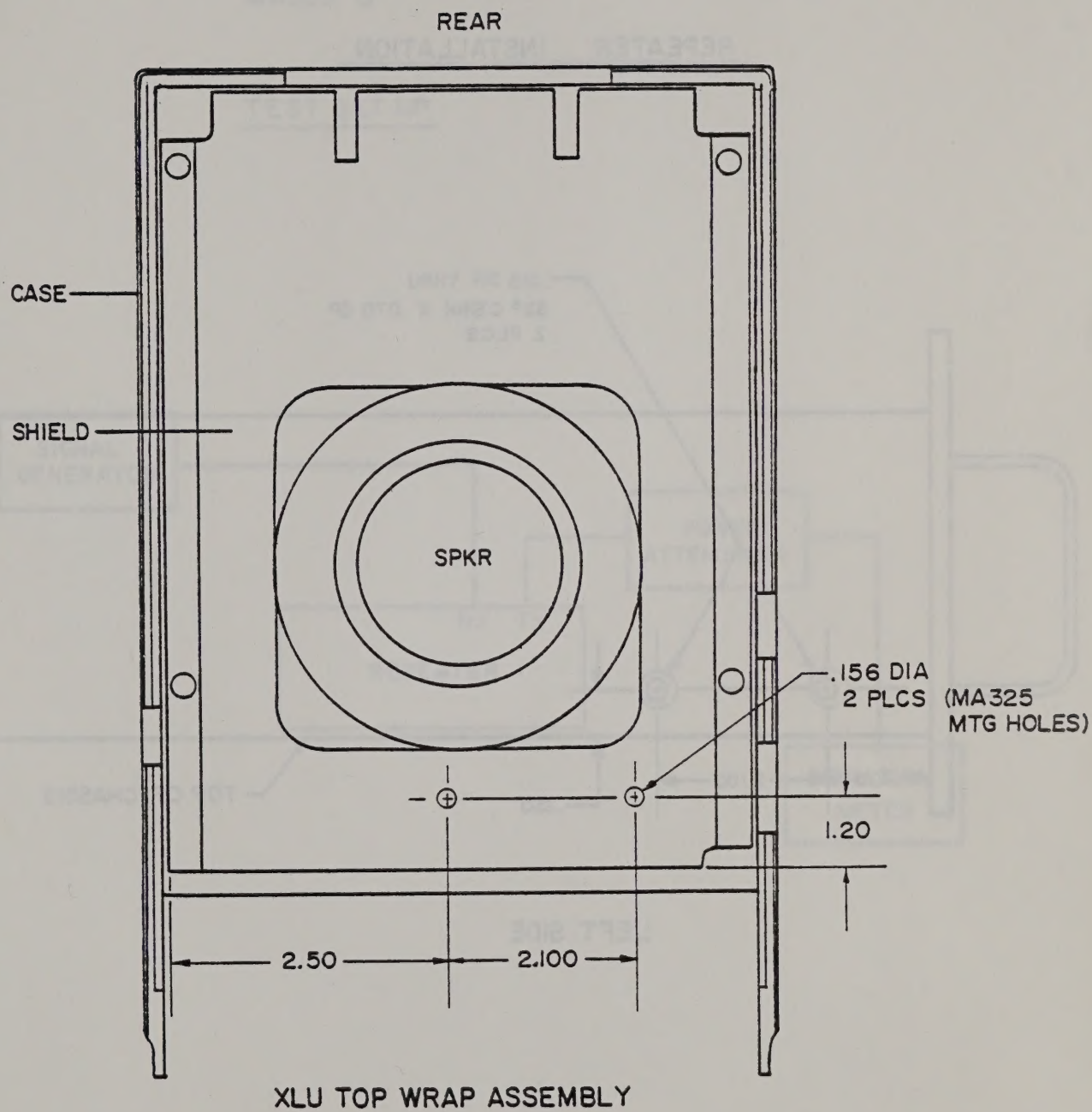


FIGURE 3

MA325 B

REPEATER INSTALLATION

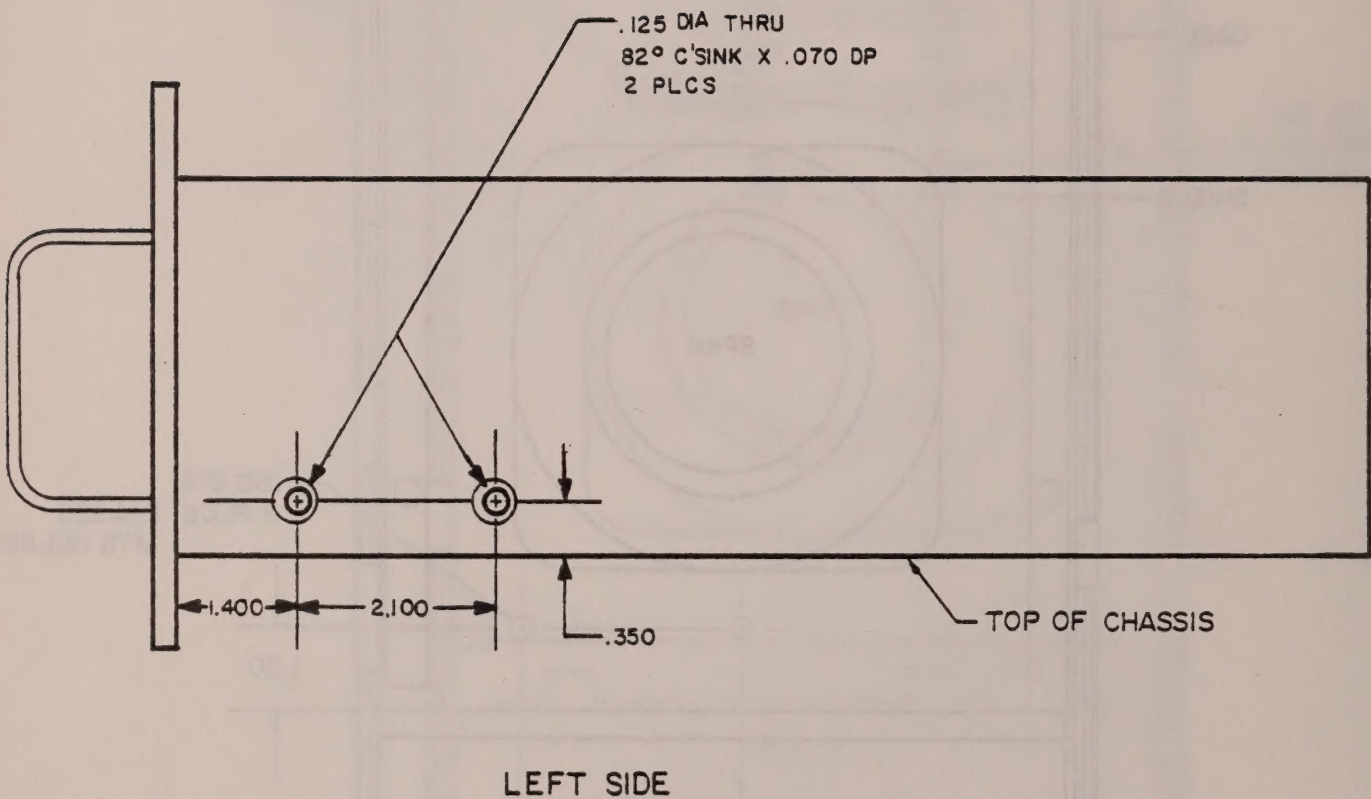


FIGURE 4

MA325 B

TEST SET UP

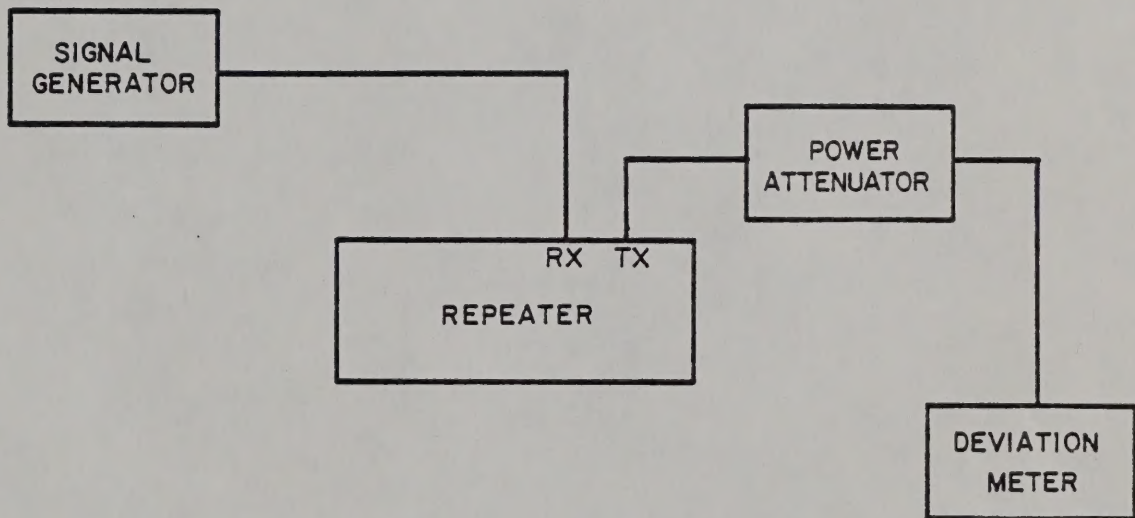


FIGURE 5

